

WHAT IS CLAIMED IS:

1. A method for manipulating a plurality of correlithm objects, comprising:

5 establishing a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space;

imposing the plurality correlithm objects on the space to yield a combined point;

10 comparing an imposed correlithm object to the combined point; and

recovering the imposed correlithm object in accordance with the comparison.

15 2. The method of Claim 1, further comprising randomly generating the plurality of correlithm objects.

20 3. The method of Claim 1, wherein imposing the plurality correlithm objects on the space to yield the combined point further comprises performing an imposing operation on the plurality of correlithm objects.

25 4. The method of Claim 1, wherein comparing the imposed correlithm object to the combined point further comprises performing a recovery operation on the imposed correlithm object and the combined point.

5. The method of Claim 1, further comprising:  
establishing one or more agents, each agent  
associated with a state space; and

5 assigning one or more of the plurality of correlithm  
objects to each agent, the one or more correlithm objects  
representing a state of the agent to which the one or  
more correlithm objects are assigned.

10 6. The method of Claim 1, wherein the plurality of  
correlithm objects are nearly orthogonal.

15 7. The method of Claim 1, further comprising  
utilizing a correlithm object of the plurality of  
correlithm objects as a correlithm object token.

20 8. The method of Claim 1, wherein imposing the  
plurality correlithm objects on the space to yield the  
combined point further comprises performing computation  
using the plurality of correlithm objects.

25 9. The method of Claim 1, wherein imposing the  
plurality correlithm objects on the space to yield the  
combined point further comprises storing the plurality of  
correlithm objects.

10. The method of Claim 1, wherein imposing the  
plurality correlithm objects on the space to yield the  
combined point further comprises communicating the  
plurality of correlithm objects.

11. A system for manipulating a plurality of correlithm objects, comprising:

an overlap generator operable to:

5 establish a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space; and

impose the plurality correlithm objects on the space to yield a combined point; and

10 a recoverer coupled to the overlap generator and operable to:

compare an imposed correlithm object to the combined point; and

recover the imposed correlithm object in accordance with the comparison.

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12. The system of Claim 11, further comprising a processor coupled to the overlap generator and operable to randomly generate the plurality of correlithm objects.

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13. The system of Claim 11, the overlap generator and operable to impose the plurality correlithm objects on the space to yield the combined point by performing an imposing operation on the plurality of correlithm objects.

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14. The system of Claim 11, the recoverer operable to compare the imposed correlithm object to the combined point by performing a recovery operation on the imposed correlithm object and the combined point.

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15. The system of Claim 11, further comprising a processor coupled to the overlap generator and operable to:

5 establish one or more agents, each agent associated with a state space; and

assign one or more of the plurality of correlithm objects to each agent, the one or more correlithm objects representing a state of the agent to which the one or more correlithm objects are assigned.

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16. The system of Claim 11, wherein the plurality of correlithm objects are nearly orthogonal.

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17. The system of Claim 11, further comprising a processor coupled to the overlap generator and operable to utilize a correlithm object of the plurality of correlithm objects as a correlithm object token.

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18. The system of Claim 11, the overlap generator and operable to impose the plurality correlithm objects on the space to yield the combined point by performing computation using the plurality of correlithm objects.

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19. The system of Claim 11, the overlap generator and operable to impose the plurality correlithm objects on the space to yield the combined point by storing the plurality of correlithm objects.

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20. The system of Claim 11, the overlap generator and operable to impose the plurality correlithm objects on the space to yield the combined point by communicating the plurality of correlithm objects.

21. Logic for manipulating a plurality of correlithm objects, the logic embodied in a medium and operable to:

5 establish a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space;

impose the plurality correlithm objects on the space to yield a combined point;

10 compare an imposed correlithm object to the combined point; and

recover the imposed correlithm object in accordance with the comparison.

15 22. The logic of Claim 21, further operable to randomly generate the plurality of correlithm objects.

20 23. The logic of Claim 21, operable to impose the plurality correlithm objects on the space to yield the combined point by performing an imposing operation on the plurality of correlithm objects.

25 24. The logic of Claim 21, operable to compare the imposed correlithm object to the combined point by performing a recovery operation on the imposed correlithm object and the combined point.

25. The logic of Claim 21, further operable to:  
establish one or more agents, each agent associated  
with a state space; and

5 assign one or more of the plurality of correlithm  
objects to each agent, the one or more correlithm objects  
representing a state of the agent to which the one or  
more correlithm objects are assigned.

10 26. The logic of Claim 21, wherein the plurality of  
correlithm objects are nearly orthogonal.

15 27. The logic of Claim 21, further operable to  
utilize a correlithm object of the plurality of  
correlithm objects as a correlithm object token.

20 28. The logic of Claim 21, operable to impose the  
plurality correlithm objects on the space to yield the  
combined point by performing computation using the  
plurality of correlithm objects.

25 29. The logic of Claim 21, operable to impose the  
plurality correlithm objects on the space to yield the  
combined point by storing the plurality of correlithm  
objects.

30. The logic of Claim 21, operable to impose the  
plurality correlithm objects on the space to yield the  
combined point by communicating the plurality of  
correlithm objects.

31. A system for manipulating a plurality of correlithm objects, comprising:

5 means for establishing a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space;

means for imposing the plurality correlithm objects on the space to yield a combined point;

10 means for comparing an imposed correlithm object to the combined point; and

means for recovering the imposed correlithm object in accordance with the comparison.

32. A method for manipulating a plurality of correlithm objects, comprising:

establishing a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space, the  
5 plurality of correlithm objects being randomly generated, the plurality of correlithm objects being nearly orthogonal, a correlithm object of the plurality of correlithm objects being utilized as a correlithm object token;  
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imposing the plurality correlithm objects on the space to yield a combined point by performing an imposing operation on the plurality of correlithm objects, the plurality correlithm objects imposed to perform at least  
15 one of: performing computation using the plurality of correlithm objects, communicating the plurality of correlithm objects, and storing the plurality of correlithm objects;

comparing an imposed correlithm object to the combined point by performing a recovery operation on the imposed correlithm object and the combined point;  
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recovering the imposed correlithm object in accordance with the comparison;

establishing one or more agents, each agent associated with a state space; and  
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assigning one or more of the plurality of correlithm objects to each agent, the one or more correlithm objects representing a state of the agent to which the one or more correlithm objects are assigned.



33. A method for generating tokens, comprising:  
randomly generating a plurality of correlithm  
objects of a space, the space comprising an N-dimensional  
space, a correlithm object comprising a point of the  
5 space; and

selecting one or more of the plurality of correlithm  
objects as one or more correlithm object tokens, the one  
or more correlithm object tokens being nearly orthogonal.

10 34. The method of Claim 33, wherein randomly  
generating the plurality of correlithm objects of the  
space further comprises generating a random correlithm  
object by randomly selecting one or more values for one  
or more entries of the random correlithm object.

15 35. The method of Claim 33, further comprising:  
selecting a correlithm object of the plurality of  
correlithm objects;

generating a token complement of the selected  
20 correlithm object; and

using the token complement as a correlithm object  
token.

25 36. The method of Claim 33, wherein selecting the  
one or more of the plurality of correlithm objects as the  
one or more correlithm object tokens further comprises:

establishing a distance threshold associated with a  
standard metric of the plurality of correlithm objects;  
and

30 selecting the one or more correlithm objects that  
satisfy the distance threshold as the one or more  
correlithm object tokens.

37. A system for generating tokens, comprising:  
a memory operable to store information; and  
a processor coupled to the memory and operable to:

5 randomly generate a plurality of correlithm  
objects of a space, the space comprising an N-dimensional  
space, a correlithm object comprising a point of the  
space; and

10 select one or more of the plurality of  
correlithm objects as one or more correlithm object  
tokens, the one or more correlithm object tokens being  
nearly orthogonal.

38. The system of Claim 37, the processor operable  
to randomly generate the plurality of correlithm objects  
15 of the space by generating a random correlithm object by  
randomly selecting one or more values for one or more  
entries of the random correlithm object.

39. The system of Claim 37, the processor further  
20 operable to:

select a correlithm object of the plurality of  
correlithm objects;

generate a token complement of the selected  
correlithm object; and

25 use the token complement as a correlithm object  
token.

40. The system of Claim 37, the processor further operable to select the one or more of the plurality of correlithm objects as the one or more correlithm object tokens by:

5        establishing a distance threshold associated with a standard metric of the plurality of correlithm objects; and

10        selecting the one or more correlithm objects that satisfy the distance threshold as the one or more correlithm object tokens.

41. Logic for generating tokens, the logic embodied in a medium and operable to:

randomly generate a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space; and

select one or more of the plurality of correlithm objects as one or more correlithm object tokens, the one or more correlithm object tokens being nearly orthogonal.

42. The logic of Claim 41, operable to randomly generate the plurality of correlithm objects of the space by generating a random correlithm object by randomly selecting one or more values for one or more entries of the random correlithm object.

43. The logic of Claim 41, further operable to:  
select a correlithm object of the plurality of correlithm objects;

generate a token complement of the selected correlithm object; and

use the token complement as a correlithm object token.

44. The logic of Claim 41, operable to select the one or more of the plurality of correlithm objects as the one or more correlithm object tokens by:

establishing a distance threshold associated with a standard metric of the plurality of correlithm objects; and

selecting the one or more correlithm objects that satisfy the distance threshold as the one or more correlithm object tokens.

45. A system for generating tokens, comprising:

means for randomly generating a plurality of  
correlithm objects of a space, the space comprising an N-  
dimensional space, a correlithm object comprising a point  
of the space; and

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means for selecting one or more of the plurality of  
correlithm objects as one or more correlithm object  
tokens, the one or more correlithm object tokens being  
nearly orthogonal.

46. A method for generating tokens, comprising:

randomly generating a plurality of correlithm objects of a space, the space comprising an N-dimensional space, a correlithm object comprising a point of the space, the plurality of correlithm objects generated by  
5 randomly selecting one or more values for one or more entries of the random correlithm object;

selecting one or more of the plurality of correlithm objects as one or more correlithm object tokens, the one  
10 or more correlithm object tokens being nearly orthogonal, the one or more of the plurality of correlithm objects selected by:

establishing a distance threshold associated with a standard metric of the plurality of correlithm  
15 objects; and

selecting the one or more correlithm objects that satisfy the distance threshold as the one or more correlithm object tokens;

selecting a correlithm object of the plurality of  
20 correlithm objects;

generating a token complement of the selected correlithm object; and

using the token complement as a correlithm object token.